UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/030,834	01/10/2002	Charles Bailey Neal	RCA 89633	2357

7590 12/01/2005	**EXAMINER**

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ART UNIT	PAPER NUMBER
2614	

DATE MAILED: 12/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 September 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on Sept.

12, 2005 has been entered.

Response to Arguments

2.   Applicant's arguments filed Sept. 12, 2005 have been fully considered but they

are not persuasive.

In re pages 4-6, applicant argues that the examiner's interpretation of the term

"on screen display" is odds with the manner in which the term is commonly understood

by those skilled in the art, and with the manner in which the term is used in the

specification because the term "on screen display" data refers to graphic data used to

generate displays that provides information to the user about the receiver or programs,

or enables user interface to control various functions of the apparatus and, that even if

the OSD graphics data are construed to correspond to the received DTV or NTSC/VGA

video data as alleged by the examiner, the format converter 4 of Han still fails to provide

a signal formatted in accordance with one of a first and second color format in response

to a selection of the first or second video signal source as recited in claim 1.

In response, the examiner respectfully disagrees. In proceedings before the PTO, claims in an application are to be given their broadest reasonable interpretation consistent with the specification, and that claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art. In re Sneed, 710 F.2d 1544, 1548, 218 USPQ 385, 388 (Fed. Cir. 1983). Moreover, limitations are not to be read into the claims from the specification. In re Van Geuns, 988 F.2d 1181, 1184, 26USPQ2d 1057, 1059 (Fed. Cir. 1993), citing In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989). There is nothing in the language of the present claims which requires graphics data used to generate displays that provides information to the user about the receiver or programs, or enables user interface to control various functions of the apparatus. The only claimed "on screen display" requirement is On Screen Display data which is clearly taught by Han, as discussed in the advisory action, because the received DTV or NTSC/VGA video data of Han is OSD data because they can be displayed on screen and the OSD processor 5 is used to process them.

Finally, as recognized by applicant, the format converter 14 of Han receives the DTV or NTSC/VGA video data having a YCbCr color format of 4:4:4, 4:2:2, or 4:2:0 and outputs a converted video data having a uniform YCbCr color format of 4:4:4 (col. 4, lines 18-26). In order to convert video data having different color format (4:4:4 or 4:2:2 or 4:2:0 into a uniform YCbCr color format of 4:4:4, the format converter 14 of Han would recognize the inputted color format. Thus, the format converter 14 of Han would outputs a signal formatted (uniform YCbCr color format 4:4:4) in accordance with one of

a first and second color format (a YCbCr color format of 4:4:4, 4:2:2, or 4:2:0) in

response to a selection of the first or second video signal source as recited in claims.

In re page 6, applicant agues that Susumu Imai fails to cure the effect of Han and

Fujimoto as discussed above.

In response, as discussed above, the proposed combination of Han and Fujimoto

discloses all the claimed limitations.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1-2 and 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Han (US Patent No. 6,421,094 B1) in view of Fujimoto (US Patent No. 5,912,710).

In considering claim 1, Han discloses all the claimed subject matter, note 1) the

claimed a video signal processing apparatus (Figs. 1 and 2), comprising: a first video

signal source for providing a first video signal having a first color format is met by the

NTSC or VGA video data which have the format information on each respective video

data and various control signals (Figs. 1-2, col. 2, line 11-43 and col. 3, lines 47-63), 2)

the claimed a second video signal source for providing a second video signal having a

second color format is met by the DTV video data which has different color formats

(Figs. 1-2, col. 2, lines 11-43 and col. 3, lines 37-47), 3) the claimed means for

generating an On Screen Display (OSD) signal for forming a graphics display, the OSD

signal being formatted in accordance with the first or second color format in response to

a selection of one of the first and second color formats is met by the OSD processor 14

which further includes a data converter 252 which receives and converts the OSD data

output from the memory interfacer 13 into a uniform format and outputs a control signal

to output the data in the selected OSD receiver (Figs. 1 and 3, col. 3, line 5 to col. 4, line

55), 4) the claimed a plurality of color conversion matrices for converting the color

information in the color palette to provide the OSD signal, which is formatted in

accordance with a selected one of the first or second color format is met by the data

converter 151 which converts the read OSD data having a YCbCr color format of 4:4:4,

4:2:2, or 4:2:0 into one uniform YCbCr color format of 4:4:4 and outputs the converted

data to the MUX 153 (Figs. 1-3, col. 3, line 5 to col. 4, line 55), and 5) the claimed

means operatively coupled to the OSD generating means and the first and second

video signal sources, for combining the OSD signal generated by the OSD generating

means with the selected one of the first or second video signals is met by the

multiplexer (MUX) 153 which receives the converted OSD data from the data converter

151 and the converted DTV or NTSC/VGA data from the format converter 14 according

to the control signal from the data converter 151 (Figs. 1-3, col. 3, line 5 to col. 4, line

55).

However, Han explicitly does not disclose the claimed a color palette that

includes color information formatted in accordance with a predetermined color format.

Fujimoto teaches that the RGB color palette circuit 104a converts the pixel data

to RGB color data, for example, when one pixel of the graphics data is comprised of an

index color mode having eight bits/pixel, the index color data are converted to a color

data of twenty-four bits for the respective colors of R (red), G (green) and B (blue) (Fig.

1, col. 7, lines 1-23).

Therefore, it would have been obvious to one ordinary skill in the art at the time

of the invention to incorporate the RGB color palette as taught by Fujimoto into Han' s

system in order to optimize the hardware for an OSD data processing in converting data

of various color formats and OSD formats into a uniform format.

In considering claim 2, the claimed wherein the color palette comprises color

information formatted in the RGB format is met by the RGB color palette circuit 104a

converts the pixel data to RGB color data (Fig. 1, col. 7, lines 1-23 of Fujimoto).

In considering claim 4, the claimed wherein the first video signal is an analog

television signal is met by the NTSC or VGA video data which have the format

information on each respective video data and various control signals (Figs. 1-2, col. 2,

line 11-43 and col. 3, lines 47-63).

In considering claim 5, the claimed wherein the second video signal is a digital

television signal is met by the DTV video data which has different color formats (Figs. 1-

2, col. 2, lines 11-43 and col. 3, lines 37-47).

In considering claim 6, Han discloses all the claimed subject matter, note 1) the

claimed a method of producing graphics having a color format that matches the color

format of a received signal, the method comprising the steps of: selecting a video signal

source from a plurality of video signal sources, the signal source providing video signals

formatted in accordance with one of a first color signal format and a second color signal

format is met by the data receiver 11 which receives and outputs a DTV video data, an

NTSC or VGA video data, an OSD data and the memory interfacer 13 which selects the

video data output from the data receiver and managing the writing/reading of the

selected data on/from the memory 12 (Fig. 2, col. 2, line 38 to col. 3, line 10), 2) the

claimed providing a plurality of color conversion matrices, wherein each color

conversion matrix is adapted to convert the color information in the color palette to

provide a graphics signal that is formatted in accordance with a particular color format is

met by the data converter 151 which converts the read OSD data having a YCbCr color

format of 4:4:4, 4:2:2, or 4:2:0 into one uniform YCbCr color format of 4:4:4 and outputs

the converted data to the MUX 153 (Figs. 1-3, col. 3, line 5 to col. 4, line 55), 3) the

claimed selecting a desired one of the plurality of color conversion matrices that

corresponds to the selected video signal source and generating a graphics signal for

forming a graphics display, the graphics signal being formatted in accordance with one

of the first color signal format and the second color signal format in response to the

video signal source selection is met by the host interfacer 112 which receives the DTV

video format information from the frame controller 11, the NTSC and VGA mode signal

and the host interface signal, and outputting an OSD data, display format information,

input format information, and various control signals to select the desired one of the

plurality of color conversion matrices (Fig. 2, col. 2, line 63 to col. 4, line 55), 4) the

claimed combining the graphics signal with the received signal is met by the multiplexer

(MUX) 153 which receives the converted OSD data from the data converter 151 and the

converted DTV or NTSC/VGA data from the format converter 14 according to the

control signal from the data converter 151 (Figs. 1-3, col. 3, line 5 to col. 4, line 55), and

5) the claimed processing the combined signal to generate an output signal is met by

the color space converter 16, a Look Up Table (LUT) 17 further processing the OSD

overlaid video data and displays on the monitor (Figs. 1-2, col. 4, line 56 to col. 5, line

23).

However, Han explicitly does not disclose the claimed providing a color palette

that includes color information formatted in accordance with a predetermined color

format.

Fujimoto teaches that the RGB color palette circuit 104a converts the pixel data

to RGB color data, for example, when one pixel of the graphics data is comprised of an

index color mode having eight bits/pixel, the index color data are converted to a color

data of twenty-four bits for the respective colors of R (red), G (green) and B (blue) (Fig.

1, col. 7, lines 1-23).

Therefore, it would have been obvious to one ordinary skill in the art at the time

of the invention to incorporate the RGB color palette as taught by Fujimoto into Han's

system in order to optimize the hardware for an OSD data processing in converting data

of various color formats and OSD formats into a uniform format.

In considering claim 7, the claimed wherein the color palette comprises color

information formatted in the RGB format is met by the RGB color palette circuit 104a

converts the pixel data to RGB color data (Fig. 1, col. 7, lines 1-23 of Fujimoto).

In considering claim 8, the claimed wherein the color conversion matrices convert

the color information in the color palette into one of a Y, PR, PB formatted signal and Y,

PI, PQ formatted signal is met by the color space converter 104b which converts the

RGB color data from the color palette circuit 104a to YCrCb television standard (Fig. 1,

col. 7, lines 1-23 of Fujimoto).

5.   Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Han (US

Patent No. 6,421,094 B1) in view of Fujimoto (US Patent No. 5,912,710), as applied to

claim 1 above, and further in view of Susumu Imai (JP 403268594 A (see abstract)).

In considering claim 3, the claimed wherein the plurality of conversion matrices

includes a conversion matrix for converting the color information in the color palette into

Y, PR, PB format is met by the color space converter 104b which converts the RGB

color data from the color palette circuit 104a to YCrCb television standard (Fig. 1, col. 7,

lines 1-23 of Fujimoto).

However, the combination of Han and Fujimoto explicitly do not disclose the

claimed a conversion matrix for converting the color information in the color palette into

Y, PI, PQ format.

Susumu Imai teaches that in an picture recoding system, an RGB-YIQ

conversion part 2 executes the matrix conversion of a digital signal consisting of R, G

and B components into a brightness component Y and color difference components I, Q

and sends the converted components Y, I, Q to a digital recording part 5 (see abstract).

Therefore, it would have been obvious to one ordinary skill in the art at the time

of the invention to incorporate the RGB-YIQ matrix conversion as taught by Susumu

Imai into the combination of Han and Fujimoto's system in order to attain partial

emphasis corresponding to human visual sense without damaging a gradation change

by converting digital picture into a brightness component and color difference

components (see abstract of Susumu).

6.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Trang U. Tran whose telephone number is (571) 272-

7358. The examiner can normally be reached on 8:00 AM - 5:30 PM, Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, John W. Miller can be reached on (571) 272-7353. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

TT
November 25, 2005

Trang U. Tran
Examiner
Art Unit 2614